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ABSTRACT

Studies published in the last five years (since 1975) concerning how groups behave, with particular emphasis on implications for the administrator who wishes to deal more effectively with groups, are reviewed. The 25 studies represent 11 journals, written by authors from six related disciplines. For discussion purposes, the studies are divided into three subject areas: group interaction, group process, and group performance. Group interaction refers to the nature of communication among group members. Group interaction variables that have frequently been studied are leadership style, sex composition of groups, and group size. Group process refers to the methods used by a group to accomplish its purposes. The following process variables are addressed: group discussion, conflict resolution, consensus, and risk-taking. Another area of importance to group process is the collective dilemma, which explores the issue of cooperation versus competition in a group situation. Such studies are also referred to as "Prisoner's Dilemma" or "Tragedy of the Commons". The earliest research on groups focused on group performance, examining whether students or workers performed better alone or in the presence of others. With the present day concern for accountability and emphasis on group decision-making and problem-solving, this issue remains one of the primary topics of investigation. It is proposed that those studies that represent the most recent variables under consideration concern member intellect, personality, group tradition, and process interventions. Process interventions refer to methods used to accomplish the group's purposes that may be employed to improve the performance of the group. Despite obvious missing links in group theory, applications for the educational administrators are addressed. A bibliography is included. (SW)

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A REVIEW OF RECENT RESEARCH IN GROUP COMMUNICATION IN HIGHER EDUCATION ADMINISTRATION: Where It Isn't

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Fall, 1980

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Preface

The research approach to this paper began with a computer search (cross-search attached) of articles of an empirical nature on group communication within organizations. It became readily apparent that there were few studies specifically related to education and communication. A review of Communications Abstracts and Current Index to Journals in Education likewise yielded few empirical studies. Nearing panic, I turned to the Handbook on Communication from which I realized that research on group communication in general was based on on group dynamics literature with which I was somewhat familiar from my studies in counselor education.

Using references from the Handbook on Communication, the Handbook of Small Group Research, and Group Dynamics, I reviewed 7 books and 101 journal articles. The more I read, the more I could see the varied nature of the literature. Particular areas of group dynamics which were well researched and lent themselves to theory were related to treatment groups in counseling and psychotherapy, interesting but not administratively oriented. In order to find enough articles on group dynamics, other than treatment studies, related to the same subject to use one of Pillemer and Light's methods, I would have had to stick to an area of the research like jury studies or simulation games. I preferred to examine studies that had a more pronounced relationship to everyday administration.

Since I had access to numerous historical reviews of group

research, I felt I would be replicating their efforts by going any farther back in the literature than 1975. Therefore, the studies I have reviewed constitute research published in the last five years which is representative, good or bad, of work currently being done in a number of related fields.

Though perhaps forced at times, I have tried to demonstrate how the administrator can use this research as a vehicle for understanding and managing group situations.

ALPHABETICAL LISTING OF STUDIES REVIEWED

AUTHOR(S) DATE	JOURNAL	AUTHOR'S MAJOR DISCIPLINE(S)	TYPE OF SUBJECTS STUDIED	TASK	VARIABLES EXAMINED
Alcock 1977	Journal of Conflict Resolution	Psychology	Psychology Students	"Tragedy of the Commons"	Process Cooperation vs. Competition
Bowers 1977	Administrative Science Quarterly	Organizational Behavior	Factory Personnel	Questionnaire	Interaction: Group Type
Duncan 1980	Small Group Behavior	Management	Office Workers	Questionnaire	Interaction: Choice Consistency
Falk 1977	Journal of Social Psychology	Psychology	Nursing Students	NASA - "Going The Moon"	Process: Perspective-Taking
Field 1978	Journal of Social Psychology	Psychology	Students	Jury Duty	Performance: Leniency
Fleishman 1980	Journal of Perosnality and Social Psychology	Sociology	Psychology Students	"Collective Dilemma"	Process: Responsibility Diffusion, Helping Behavior
Ford 1977	Small Group Behavior	Management	Organizational Behavior Students	"Lost at Sea"	Performance: Ad Hoc vs. Established Group
Gerke 1978	Organizational and Administrative Sciences	Management	Grain Elevator Managers	Grain Elevator Management Game	Process: "Risky Shift"

ALPHABETICAL LISTING OF STUDIES REVIEWED
(Continued)

AUTHOR(S) DATE	JOURNAL	AUTHOR'S MAJOR DISCIPLINE(S)	TYPE OF SUBJECTS STUDIED	TASK	VARIABLES EXAMINED
Glover 1978	Small Group Behavior	Educational Psychology	Psychology Students	Unusual Uses Test	Interaction: Leadership Creativity
Green 1975	Academy of Management Journal	Management	Data Processing Students	Class Discussion	Interaction: Leadership Nominal and Interacting Groups
Greene 1980	Journal of Applied Psychology	Business	Manufacturing Workers	Survey	Interaction: Leadership Size Tradition
Hackman 1976	Organizational Behavior and Human Performance	Psychology	Students	Electrical Component Assembly	Performance: Process Intervention
Hare 1980	Small Group Behavior	Sociology	Psychology Students	Community Concerns Problem	Process: Consensus vs. Majority Rule
Hendrick 1979	Journal of Applied Psychology	Management	Students	"Broken Squares"	Performance: Member Intellectual Ability
Herold 1978	Academy of Management Review	Organizational Behavior	8 Other Studies	Review	Performance: Process Intervention

ALPHABETICAL LISTING OF STUDIES REVIEWED
(Continued)

AUTHOR(S) DATE	JOURNAL	AUTHOR'S MAJOR DISCIPLINE(S)	TYPE OF SUBJECTS STUDIED	TASK	VARIABLES EXAMINED
Kahn 1980	Journal of Personality and Social Psychology	Psychology	Psychology Students	Rewards Allocation	Interaction: Sex of Members
Kaplan 1979	Journal of Applied Behavioral Science	Organizational Behavior	College Freshmen	"Ann Landers Advice Board"	Performances: Maintenance-Suppression vs. Expression
Kindler 1979	Journal of Applied Behavioral Science	Management	Management Graduate Students	"Broken Squares"	Performance: Meditation
Laughlin 1980	Journal of Personality and Social Psychology	Psychology	Psychology Students	Verbal Analogies	Performance: Mental Ability
Liddell 1976	Academy of Management Journal	Organizational Behavior	College Students	Symbol Identification	Performance: Firo B Theory
Manners 1979	Academy of Management Journal	Management	High School Students	NASA - "Going the Moon"	Interaction: Size Consensus
Meadow 1980	Human Relations	Organizational Behavior	Factory Personnel (Professional)	Questionnaire	Interaction: Organicity Cohesion
Morgan 1976	Academy of Management Journal	Business			Process: "Risky Shift"

ALPHABETICAL LISTING OF STUDIES REVIEWED
(Continued)

AUTHOR(S) DATE	JOURNAL	AUTHOR'S MAJOR DISCIPLINE(S)	TYPE OF SUBJECTS STUDIED	TASK	VARIABLES EXAMINED
Pood 1980	Small Group Behavior	Communications	Speech/Business Students	"Gambler's Dilemma"	Performance: Controlled Conflict
Rumsey 1978	Journal of Social Psychology	Psychology	Psychology Students	Jury Duty	Process: Leniency Shift

Introduction

"For God so loved the world, He didn't send a committee" represents a common attitude about groups and their effectiveness. Certainly, it's the attitude held by many professionals in educational institutions. Recently, a colleague confided that she'd been appointed by the University President to take over as chair of a seemingly prestigious task force. However, the honor quickly tarnished. At the first meeting, one of the group members lashed out at the new chairperson for sundry frustrations the task force had been experiencing, and thereafter this single individual routinely blocked what the chairperson considered effective group communication and performance.

Most of us can testify to related, if not very similar, situations. Dysfunctioning groups are a common occurrence in many work settings. While difficulty with individual employees may be readily apparent, effective administrators are sensitive to the more subtle, yet equally costly, problems of working groups within the organization.

In the educational setting the administrator deals with groups constantly - task forces, search committees, advisory councils, scholarship committees, grievance boards, ad hoc groups, and even committees of committees. These groups may be composed of students, faculty, parents, employees, volunteers, interested community

members and people on so many committees they don't have time to qualify in any of the other categories. Let's face it. Regardless of what one hears about alienation in modern society and its isolated existential nature, we do everything in groups! The reasons are relatively obvious. There's safety in numbers. Whether the group is formal or informal, effective or ineffective, large or small, it harnesses action which the individual might not have the expertise, the mandate, the power, or the courage to do alone. The group provides a collective approach, a shared responsibility, and a protective anonymity to its decisions. Acquiescence to the recommendations of the group is frequently used strategy by leaders to avoid the criticism of those elements of the constituency bound to be displeased by the final solution to a difficult problem.

Despite the diversity of group titles, their membership, or their purposes, the administration must be prepared to interact with all of them. Being able to effectively deal with groups whether one appoints them, or serves on them requires at the very minimum an understanding of how groups communicate. Unfortunately, one does not just sit down and read a text on group communications in educational organizations - there is no such book to date. Furthermore there are no recent articles on the subject, with the possible exception of a narrative or two in the NASSP Bulletin about how principals should run meetings (Mackenzie, 1979) or act as group leaders to manage conflict (Schofield, 1977). Empirical studies

concerning group communication in higher education focus on treatment groups composed of college students. Empirical research about group behavior among professionals in a higher education setting remains an elusive subject. So to learn about group communication in higher education, one studies group dynamics research in related fields and interpolates.

According to Alvin Zander, Director of the Research Center for Group Dynamics of the University of Michigan, group dynamics refers to:

> *a field of inquiry dedicated to achieving knowledge about the nature of groups, the laws of their development, and their interrelations with individuals other groups, and larger institutions.* (Cartwright and Zander, 1968)

Group dynamics research is frequently associated with treatment groups ranging from marathon encounter sessions run by qualified psychotherapists to self-help nude therapy groups. The impact of the former on participants is testimony to the power groups can exert on individuals while, regrettably, it is publicity about the latter which has cast a shadow over such legitimate group work.

Nonetheless, an understanding of communication in groups can be approached via group dynamics research. In particular this review focuses on empirical studies regarding those elements of group dynamics related to communication - group interaction, group process and the resulting group performance. An examination of the recent research should have practical applications since an

understanding of the variables affecting group communication will help the administration better predict and respond to group behavior which will enhance management of the organization.

Overview of the Research

The research most relevant to group communication lies somewhere between the study of the individual - psychology - and the study of social groups - sociology. More specific points on the continuum are the study of social psychology and even more finitely, the study of small group behavior. The interdisciplinary nature of small group research is even more expansive, as its study has variously found its way as a subdiscipline in academic departments such as speech, social work, public health, education, and business (Zander, 1979). This appeal of small group research to so many has been a result of what one researcher has called *"the vision of the group as microcosism"* (Mills, 1979). That is, the small group could become the vehicle for studying the dynamics of all social systems. That idea has been tempered by more recent difficulties with small group research design.

At this point one must logically ask, what is a small group and how is it differentiated from a large group? Robert Bales of Harvard, one of the pioneers of small group research, defines the small group as two or more individuals interacting to the extent they have adopted rules, evolved norms about their behavior toward one another and the task (Strodtbeck, 1973). In the most recent

issue of Small Group Behavior, the journal which *"seeks to encourage development of a comparative social science of group work"*, Duncan and Beeland operationalize the small group by degrees of human interaction, shared goals, and a relatively defined structure, usually more than three individuals and sometimes as many as thirty (Duncan, 1980). Actual numbers depends on the level of interaction. That is, five people riding a bus don't constitute a small group if they don't interact, whereas twenty-five boys marooned on an island after a plane crash may develop the dynamics of a small group. While maximum numbers in a small group vary, four seems to be a minimum. Research over the past four decades supports the proposition that groups of two or three develop some very special characteristics like ganging up - two members turning on the third - to warrant their own unique studies.

Another perspective on small groups comes out of the field of communication. The literature of this pervasive body of knowledge is far ranging. It is noteworthy then that in the area of small group communication, authors previously mentioned here are cited. Whether one approaches group communication from a small group behavior focus or from a strict communications viewpoint, the research is one and the same.

To lock in the origins of small group research firmly, an historical perspective is required. Hare, in his classic Handbook of Small Group Research, traces the early roots of group research

to those "ancestral social psychologists" as far back as the turn of the century and the work of none other than Frederick W. Taylor (Hare, p. 385). Early researchers were concerned with the issues still being investigated today, like the effects of the group on individual performance and group pressure to conform. An increase in research activity is noted just after World War I with the focus still on workers and performance (Hare, p. 386). Then in the 1930's the classic Western Electric bank wire room investigations were completed. That's right, the Hawthorne effect was a group phenomenon.

The changing fortunes of group research are encapsulated eloquently by Zander in an article which appeared in a special issue of the Journal of Applied Behavioral Science entitled ominously, "What's Happened to Small Group Research?" He relates the establishment of the National Training Laboratory for Group Development in 1947 and its noted *"person-centered interaction"* to the subsequent *"reduced regard for the study of groups."* (Zander, p. 275) During the fifties social psychologists continued their research into the power of groups, while sociologists like Bales concentrated on method of processing interactions in group problem solving situations.

It was in the sixties that the number of research articles on groups decreased, and the number of essays on the uses of groups in education, therapy and management increased (Zander, p. 277). The state of the art today is described by another eminent group

researcher, sociologist Kurt Back of Duke University:

> *Little work on groups as such, relating their properties and proposing theories about them, is done today. With few exceptions textbooks and monographs on groups do not discuss their nature or the current research on them, but lead quickly to techniques on how to use them to produce certain effects* (Back. 1979).

The effect of these past events is that current research on small group behavior is experiencing some retrenchment. Consequently, many empirical studies relevant to group behavior reflect work done in more general disciplines including psychology, sociology, organizational behavior and managment science.

To add insult to injury, group research has experienced considerable criticism for weaknesses in research format. Chief among the criticism is the propensity of group researchers to design laboratory experiments on student subjects. Of the twenty-five empirical studies reviewed here, eighteen follow this design. While there are understandable economic and logistic constraints, the likelihood of generalizing from such studies to real settings does not increase with continued use of the approach. Bales, who was himself soundly criticized some years ago for experimenter bias in his work on self-analytic groups of Harvard psychology students (Shodtbeck, 1973), catalogues still other complaints:

> *There have been misgivings among social psychologists for several years now about growing problems of academic laboratory experimentation: the extensive use of deception, the concentration on the counter-intuitive effects, the omnipresence of probable*

> *experimenter effects, the narrow ad hoc operational definition of experimental variables* ... (Bales, p. 5)

Another criticism is that group researchers inappropriately emphasize single members within the group and outside the group interaction. Again, this is a result of logistical contraints felt by researchers since using entire interacting groups as subjects *"demands too many participants, costs too much, takes too much time and is too complicated in design and analysis"* (Zander, 1979a, p. 424). Strodtbeck (1973), Hoffman (1979) and Lakin (1979) all decry the contrived nature of groups in experimental research but more hopefully suggest the need for greater collaboration between those who work with groups in the field and thos who investigate their processes.

Seeking to avoid the repetition of past excesses, it is worth noting to recognize that group research has it origins in organizational dynamics, that is, the study of workers and how they interact in the larger group. It was not until group research took a turn toward treatment groups, that the quality of research suffered. Perhaps a return to earlier organizational approaches is in order.

Still, as long as a single psychology student is available as a subject, behavioral scientists will continue to do research. Recent research trends, which relate to group interaction, process, and performance, include *"the origins of group cohesiveness, the nature of social pressures within a group, and the dynamics of*

making group decisions." (Zander, 1979a, p. 448) As others have noted, these topics are not new but just in the ascendency. Basically, researchers are asking the same questions they asked at the turn of the century - how does the group influence the individual and vice versa. (Hare, 1976; Lakin, 1979).

Review of Current Research

Aside from all the confusion about where the research is and how it got there, what do recent empirical studies say about groups and how can that knowledge assist the administrator in communicating with groups and managing them? As previous discussion implies, there is limited practical application to be gleaned from a less than integrated body of research. It is also difficult to provide a review of a number of empirical studies concerning one specific area of group behavior with the possible exception of laboratory experiments on the "Prisoner's Dilemma" or simulation games which explore coalition bargaining (Dawes, et al., 1977; Norton, 1979; Murnighan, 1979; Kormorita, 1980; Bonacich, 1976; Goehring, 1976). While these studies are interesting, even fun, to read, the extent to which one can generalize about their results to actual field settings is limited. At best, one can examine those empirical studies which are representative of the current literature and make piecemeal application while hoping for extended conceptualization by investigators at some point in the future.

The review presented here focuses on studies published in the

last five years which shed light on those aspects of how groups behave with particular emphasis on the implications for the administrator who wishes to deal more effectively with groups. The twenty-five studies included represent eleven different journals, written by authors from six related disciplines. For thematic presentation, the studies are divided into three subject areas - group interaction, group process and group performance.

Group interaction refers to the nature of communication among group members. The communication may be verbal or non-verbal, stated or implied. Group dysfunctions related to group interaction include members who monopolize group time, or those who are uncommitted, that is present in body only. Members who are absent from meetings or challenge the group leader constantly also manifest problematic group interaction. Variables which can affect group interaction include group size, style of leadership, group cohesiveness and sex of group members.

Over the years, the literature on leadership has been extensive. However, research on leadership and small groups has been both *"diffuse and confusing"* (Greene & Schriesheim, 1980). Recent research on the effect of leadership style on group interaction includes Green and Schriesheim's study of worker groups in manufacturing settings. Using Stoghill's model of instrumental versus supportive leadership, their research supports the use of instrumental type leaders with large, newly formed groups. This study

merits special notice since its subjects were workers in a field setting. Another study out of the management science discipline examines the effects of permissive, democratic, and authoritarian leadership styles with nominal and interacting groups (Green, 1975). Nominal groups, wherein group members do not interact except with the leader and then only to offer written suggestions for solving a particular problem, have been found effective in some business settings (Green, p. 63). No significant difference was found in leadership style except in one subset of the task studied in which subjects who were in permissive, interacting groups generated more unique responses. If unique and creative can be aligned, then Glover and Chambers' study on leadership style and creative production supports Green's finding (Glover, 1978). Glover and Chambers' study of the effect of authoritarian, democratic and permissive group structures on creative behaviors found the permissive structure to be significantly superior to the authoritarian in fluency, flexibility and originality of creative behaviors. While there may be some implication for administrators to devise unstructured, interacting groups with permissive leadership when the task requires a creative response, keep in mind Green's study was done on students in an electronic data processing course discussing class difficulties and Glover and Chambers examined one hundred and eight psychology students asked to comment on the unusual uses for a cardboard box.

Another group interaction variable which has been frequently

studied is that of sex composition. That is, under what circumstances is it better to have an all male, all female or mixed groups? Of course, there is no definitive answer to that question. However, out of this research grew an interest in the equity/equality phenomenon. Equity, refers to allocation of rewards on the basis of an individual's specific contributions to the task at hand (like World Series salaries, unless you were the bat boy on the 1978 New York Yankees), while equality refers to equal allocation across the board. Previously, research has shown men to be more equity-oriented than women (Kahn, et al, 1980). In the past, studies concerning the equity/equality question have always examined groups of all males or all females until this year. Kahn, Nelson and Gaeddart explored the issue using mixed groups of psychology students. Allocation by women was shown to vary away from equity depending on the sex of the subject being rewarded and situational demands (Kahn et al., p. 750). While generalization from any study on one variable concerning sex based attitudinal differences is risky, it's conceivable that an administrator might use such knowledge when communicating about salary, merit raises, or in deciding about the composition of groups to make recommendations regarding such issues.

Three recent studies concerning group interaction variables have been done on work groups. Each explored some aspect of measuring interpersonal relationships with colleagues and superiors. These studies gave insight into how workers might interact. Bowers and

Hausser (1977) take on a monumental task to evolve a typology of work group types from over 2,000 groups and the impact of organizational development intervention on them. Duncan and Beeland (1980) use a sociometric approach to explore the relationship of personal and organizational competence. The application of a model of organicity to small groups is examined by Meadows (1980). Organicity reflects a democratic team orientation and a situationally adaptive approach to a group's job. There is a close parallel to the concept of organicity and professional values found in education administration theory. While none of these studies tested their measure's ability to predict group performance, it should be noted that these studies came from three very different points of view, and analyzing different levels of organization. Practical application for the administrator is limited through further research using Meadows' model may produce a method of analysis for professional organizations.

One last element of group interaction that should require some thought, though it is frequently taken for granted, is group size. How does group size affect group interaction? Is there an optimal size group? Questions of size cannot be decided singly. That is, size is usually a function of another variable such as the purpose of the group, or the type of group process involved. The literature indicates, for example, that five is an optimal size for group discussion and odd number groups tend to have less antagonism and disagreement, as such groups can always resort to majority rule

(Hare, 1976). Recent research concerning problem solving effectiveness and consensus seeking have taken another look at size. Manners (1975) in the Academy of Management Journal reports a significant nonlinear effect of size on problem solving effectiveness and member consensus among high school student groups. The implication here is that size can have a major effect on group member communication. Particularly where consensus is involved, the smaller (3 to 5) group allows for more discussion. However, when the quality of the group's decision is a critical concern, the more the better, with group sizes of seven to twelve being more appropriate (Manners, p. 723).

The second group of empirical studies reviewed concerns group process which refers to the methods used by a group to accomplish it purposes. Process as communication may take the form of a paper and pencil method, a way of thinking, or a set of instructions. Process variables examined in this review include group discussion, conflict resolution, consensus, and risk taking.

One area of group process research which has been extensively researched over the last ten years is the phenomenon known as the "risky shift." According to Hare, "*...so much research has now been done on this subject that the 'risky shift' provides one of the best documented examples of differences between individual and group problem-solving*" (Hare, p. 325). Essentially "risky shift" refers to the situation wherein a group member makes a riskier decision after discussing an issue with the group then if he/she had made

the decision alone. Research provides evidence that "risky shift" is more likely to occur when group discussion provides relevant arguments, when responsibility for the decision is diffused and when others in the group approve of risk taking (Hare, p. 329). While research on "risky shift" may be passe' in some circles, studies on the subject continue to appear in the literature, testimony to Zander's notion of *"the preference of scientists to work on familiar problems"* rather than on ones unexplainable by accepted theories (1977, p. viii). Two studies included here explore the "risky shift" issue. One study by Morgan and Beatty (1976) is noted because it refers to the phenomenon's relationship to management decision making. Morgan and Beatty found that the quantity of argumentation outweighed the quality of argumentation in group managerial decision making (1976, p. 307).

The second study on "risky shift" is included because the researchers did use worker subjects. The study examine the "risky shift" phenomenon as it developed among grain elevator managers engaged in a grain elevator management simulation game (1978). At least the researchers acknowledge the weakness in most laboratory experiments using student subjects and attempted another method. Application for the educational administrator from the "risky shift" issue take the form of a *caveat* regarding accepting the recommendations of groups. Awareness that the "risky shift" may in part be responsible for some group outcomes will temper

their impact.

Closely related to "risky shift", yet included because it represents another large group of research is a simulated jury study on "leniency shift" by Rumsey, Allgeier, and Castore (1978). Jury studies are unique in their examination of a specific type of group decision-making. Such studies have proliferated over the last twenty years and are part of the current literature as well (Davis, Kerr, Atkin, Holt & Meek, 1975; Nemeth, 1977; Davis et al., 1976). The "leniency shift" study mentioned here supports the notion that an individual's judgment may be substantially altered through the process of group discussion - a concept the administrator should weigh heavily when deciding whether to employ a group or when choosing group members.

Consideration of the variables of group process would not be complete without the review of the body of research concerning collective dilemmas. The collective dilemma explores the issue of cooperation versus competition in a group situation. When a member's personal interests are at odds with the group's, will the individual cooperate with the group or follow his/her own interests? Such studies are also referred to as "Prisoner's Dilemma" or "Tragedy of the Commons", after tasks created to explore the question. A most recent study by Fleishman (1980) supports the idea of cooperation as a function of responsibility diffusion. That is, the more people in the group to be held responsible for

the action, the less likely the individual is to cooperate. However, Fleishman views collective action as a helping behavior and feels that certain individuals will act altruistically despite possible diffusion.

On a somewhat less positive note, Alcock and Mansell found that some group members may exhibit "intransigent noncooperativeness" (1977, p. 456). Some people will follow their own individualistic strategies regardless of cooperative behaviors exhibited by others.

While these two studies employed student subjects in artificial tasks, there are still some generalizations relevant to the administrator. Fleishman's study gives some insight into how the number of members on a task oriented committee may affect the production of a report, for example. If there are too many individuals on the committee, responsibility will become diffused. Likewise, when dealing with existing groups, consider the effect size may have on the type of tasks the group may realistically be expected to accomplish in a given period of time. Finally, be cognizant of those noncooperators and don't appoint them to any groups requiring consensus.

Elliott Pood provides new insight into group process in his study of group conflict situations (1980). Pood's thesis is that conflict should be viewed with communication as a major determinant. He suggests two possible responses to conflict in the group—regulated response for controlled confrontation without verbal

abuse, and unregulated response usually characterized by hostility among the group or avoiding the conflict and creating underlying tensions. Using a simulation game called "Gambler's Dilemma", groups using the regulated response made more accurate decisions and expressed greater social satisfaction with the group experience. Meaningful application for this study is apparent. Too frequently administrators appoint a group, assign a task and make no mention of process concerns. The implication of Pood's research is that structuring the process can have positive effects.

Other aspects of group process related to group member satisfaction include perspective taking and consensus. In his study on perspective taking, or putting oneself in another's place, Falk (1977) found that groups who were initially instructed in the approach produced significantly more creative solutions, facilitated more effective communication and experienced greater group satisfaction. The implications for this study are similar to Pood's. That is, instructional intervention at the onset of group activity can affect outcomes.

Paul Hare's latest research presents the consensus method with respect to its effect on the social system model, particularly its effect on integration and pattern maintenance. In his study of ad hoc groups using consensus and majority rule, group members rated satisfaction with the group decision process greater with consensus (Hare, 1980). In his studies of the Quakers' use of consensus

and similar processes in emerging nations in Africa he concluded:

> *Given groups of equal size and abilities equal experience with the discussion methods, and adequate time to find solutions, one would expect the consensus method to result in better quality solutions with higher overall satisfaction among the members and more commitment to decisions reached* (Hare, 1980, p. 141).

The message is clear with respect to the power of consensus engendering commitment. The difficulty, at least in higher education settings, is to find the time required to reach consensus.

While the potential benefit in understanding group process is extensive, the big concern for most administrators is how well the group accomplishes its task. This third section of the review focuses on variables related to group performance. One expects the meaning of performance to be clear, since in educational settings most groups are task oriented or problem-solving in nature. Their performance is judged by the quality of the solution or the extent to which the task is completed. Tidy as that may seem, such measures are not "cut and dried." Rather, there is a constant question about whether the group is doing a better job than the individual. Particularly when a group is dysfunctioning or moving very slowly, the administrator has to wonder if the group approach is really worth the trouble.

The earliest research on groups focused on group performance, examining whether students or workers performed better alone or in

the presence of others. With the present day concern for accountability and emphasis on group decision-making and problem-solving, this issue remains one of the primary topics of investigation. Every conceivable variable has been examined as it affects performance, and, as is the tradition in group research, the evidence is mixed. In this review we include those studies which represent the most recent variables under consideration such as member intellect, personality, group tradition, and process interventions, even meditation.

Process interventions refer to those methods explored in the previous section and how they may be employed to improve the performance of the group. Kaplan (1979) explores the effects of open maintenance of work relationships on group performance by testing his bipolar theory of group maintenance. Kaplan's thesis is that the culturally prevailing format in task oriented groups usually gives the appearance of being positive, avoids disagreements and gives support to individual members (maintenance by suppression).

As was implied in Pood's study earlier, this avoidance of conflict may, in fact, weaken the quality of problem-solving since opposing viewpoints are less likely to be expressed and different sides of an issue may not be explored. Kaplan favors a maintenance by expression where the group confronts negatives as well as positives. What did his study find? Process analysis made moderately integrated groups more cohesive but not appreciably more effective.

In other words, process intervention may help dysfunctioning groups and their members feel better about each other but there is no evidence group performance will improve.

Hackman, Brousseau, and Weiss (1976) also investigated process intervention strategies and found group members more cohesive when the group strategy allowed for dealing with conflict and having input about how the task was to be completed. An interesting sidelight was that in control groups of this study, group members rarely discussed performance strategies before starting work. This supports Kaplan's thesis about the cultural norm of avoiding possible disagreement. Hackman, et al. found that process intervention did improve performance effectiveness but only in problems where the approach to the solution was not readily apparent.

Since the studies of both Kaplan and Hackman, et al. were laboratory experiments using student subjects, another viewpoint from the management sector merits consideration. Herold (1978) reviewed eight empirical studies (including Hackman's) to investigate the relationship between group process, intervention into that process and group performance. While his analyses were all done post hoc, Herold determined that intervention was task contingent, and developed a framework for choosing a general intervention strategy based on analysis of the group's task (Figure 1).

The application of process interventions by administrators in educational institutions, where professional values are always a

concern, lies chiefly in the administrator's ability to contribute to his/her referent power base. While process intervention has not been shown to directly increase group performance, there is definite impact on how individuals value the group experience. Replication of a study like Hackman's et al. or Kaplan's among professionals could have considerable insight.

Turning to the perennial question of individual versus group performance as it relates to problem solving, two recent studies explore the effects of group member intellect. Hendrick (1979) examined groups and level of abstract thinking, while Laughlin and Adamopoulos (1980) looked at individual versus groups on non-judgment, intellective tasks. Groups composed of high abstract thinking members performed at double the rate of concrete thinking groups. Hendrick implies that, given such an increase, training in abstract level thinking might be worthwhile. Laughlin, et al. emphasizes the learning environment created when members work on non-judgmental tasks together. Both these studies were done on student subjects using artifical tasks and represent group research that has limited application except in the general understanding of the obvious.

To give a feel for the adaptation of other management theory to groups, a study of group performance and Schutz's Firo Theory is noteworthy (Liddell and Slocum, 1976). The study supports the notion that personality factors affect the individual's role compatibility in a group situation. Role adaptation is a common

problem in management groups and can have considerable effect on the nature of communication in the group. Exploration of this type of subject in a management journal is gratifying, though the research format included student subjects in a nominal group setting which makes generalization about findings difficult.

The literature abounds with discussions of ad hoc groups. Similarly administrators in educational institutions are forever appointing or serving on ad hoc groups. Do such groups really perform well? Can a group of individuals who do not routinely interact together be expected to make decisions of quality? Needless to say, what evidence there is is mixed. Ford, Nemiroff and Pasmore (1977) compared consensus decision-making by ad hoc and long standing groups. They found ad hoc groups to produce significantly better quality decisions, utilize resources better and require less time to accomplish all this. It may be that long established groups develop dynamics of interaction that take more time to confront, mountains out of mole hills, as it were. Whatever the case, more research is necessary before any consistent conclusion can be made. Suffice it to say, the ad hoc group remains a reality for any educational administrator. The possiblity that the research may support its use should be heartening.

Representative of management science interest in stress and performance is a study done by Kindler (1979) on the effects of meditation and relaxation on group performance. While meditation

as such may conjure up visions of some unique group meetings, Kindler views it as a behavioral intervention more effective than instructional interventions which attempt to change already fixed organizational responses. His study found meditators minimized the time to accomplish the task involved, as well as reporting greater group cohesion.

To underscore further the difference of opinion among researchers on issues regarding performance another "jury study" is included. As implied previously in the discussion of Rumsey, et al., jury simulation studies have had a longstanding reputation for being able to reproduce similar performance to actual juries to the extent that officers of the court can use the results (Strodtbeck, 1973, p. 648). Field and Barnett (1978) explored the performance of students used in simulated jury experiments versus non students. Students were found to be more lenient in their sentencing than non students. Field's study exemplifies the problems described earlier regarding placing faith in studies constructed around student subjects in laboratory experiments using artificial tasks. Yet such studies continue to be done (see Figure 2).

Overall application of these studies on group performance must be made conservatively. Because of the varied nature of the studies, one can expect effects on performance to be specific to the type of group and its purpose. To the extent that a particular study employs a situation similar to a real setting, one can make some application. Otherwise, one can only look at tendencies.

Conclusion

There are those who would say that research in group behavior over the last five years on topics like coalition bargaining, Prisoner's Dilemma, Going to the Moon, Tragedy of the Commons, and other lab experiments have no clear-cut theoretical base and limited practical application. While it may be difficult to portray a study examining the collective efforts of 96 organizational behavior students to survive at sea in a small rubber raft 1,000 miles from the nearest land following the sinking of their yacht which was destroyed by fire (the Lost at Sea Dilemma), as the ultimate in research methodology, to discount group research completely would be to deny the work of a wide range of professionals who publish about one hundred twenty studies a year. Though not all of these relate to group interaction, process or performance in organizations, one can hope that the recent crisis over the lack of studies in natural settings will result in more group research about the real world.

Despite obvious missing links in group theory, the educational administrator can learn from trends in the research. Considerable impact can be made on the administrator's attitude toward the use and structure of groups and how to communicate with them. Because the administrator appoints groups and assigns tasks routinely, understanding how to structure a group, not just in terms of group composition but in how it is to go about performing the task, can contribute to maximizing the group's performance. Understanding

the dynamics of group cooperation or the effects of group tradition, can help the administrator analyze those long term groups that seem to be bogged down. The use of groups and committees is so pervasive in some settings to warrant a full time process consultant. Such an individual could provide groups with initial instruction about consensus, perspective taking, maintenance by expression and other process strategies.

Lastly, a common thread through numerous studies cited here relates to the ability of the group to affect member satisfaction and group cohesion. That is, the group setting can be the place where professionals can get some positive strokes. Given the need professionals have to feel that their input is important, this would not be an opportunity the administrator should let slip by.

Administrators frequently pay little attention to organizing a group except, perhaps, to make sure the members are representative of a particular constituency to create a liaison for possible future alliance. This kind of approach reflects a vulnerable naiviete. To be aware of the power of the group is to move toward controlling it and better managing the organization as a whole.

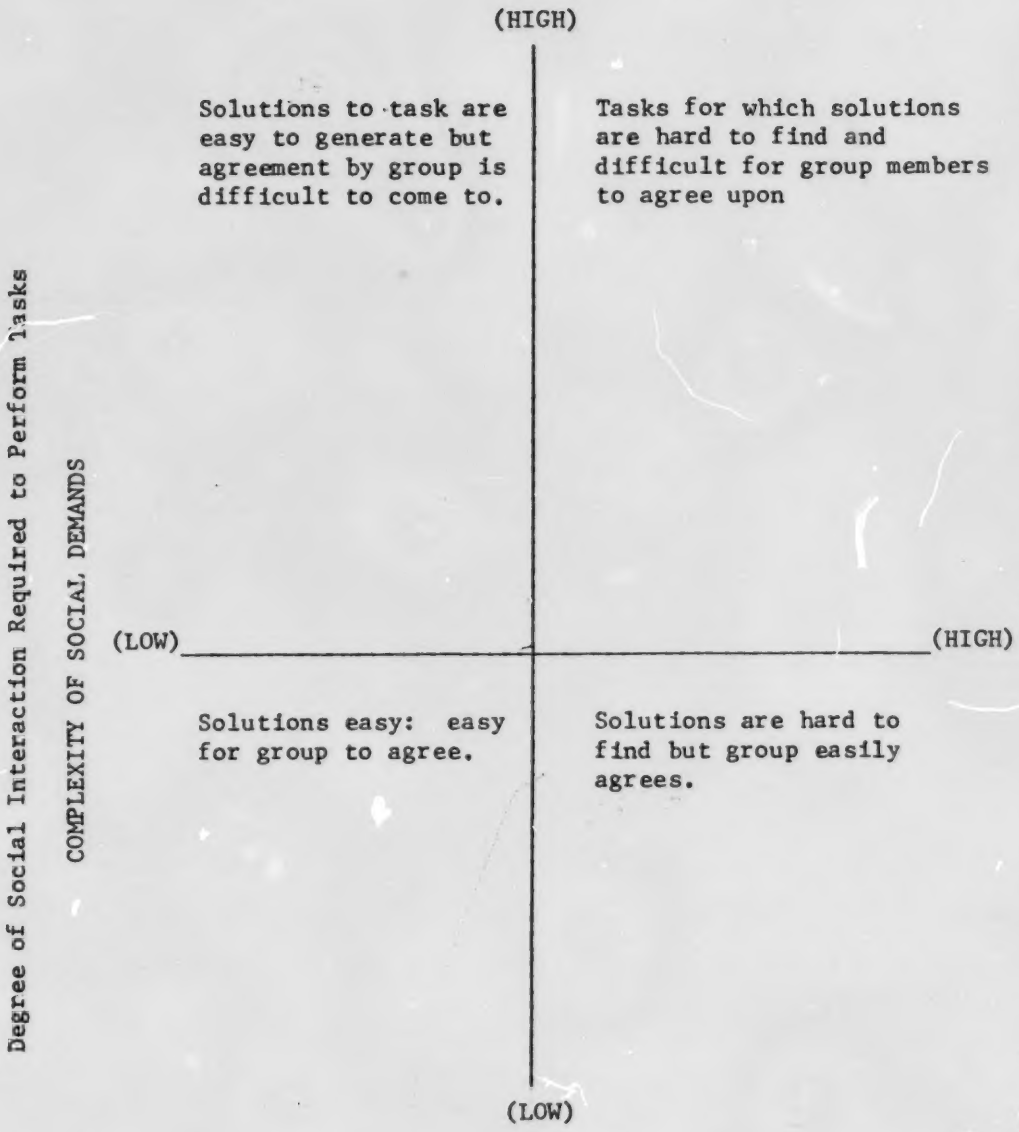
(HIGH)
Solutions to task are easy to generate but agreement by group is difficult to come to.
Tasks for which solutions are hard to find and difficult for group members to agree upon
(LOW)
(HIGH)
Solutions easy: easy for group to agree.
Solutions are hard to find but group easily agrees.
(LOW)
Degree of Social Interaction Required to Perform Tasks
COMPLEXITY OF SOCIAL DEMANDS
COMPLEXITY OF TECHNICAL DEMANDS:
Degree to which ready solutions are not available; materials for solution hard to acquire.

Figure 1: Herold's Group Task Analysis

AUTHOR	TYPE OF SUBJECT		SETTING		TYPE OF TASK		GROUP INTERACTION AMONG SUBJECTS	
	STUDENT	WORKER	LAB	FIELD	REAL	ARTIFICIAL	YES	NO
Greene		X		X				X
Bowers		X		X	X			X
Duncan		X		X	X			X
Meadows		X		X	X			X
Gerke		X	X		X		X	
Hackman	X		X		X		X	
Hare	X		X		X		X	
Rumsey	X		X		X		X	
Green	X		X		X		X	
Manners	X		X			X	X	
Kahn	X		X			X	X	
Laughlin	X		X			X	X	
Hendrick	X		X			X	X	
Glover	X		X			X	X	
Pood	X		X			X	X	

Figure 2: Studies by Type of Subjects Used and Type of Setting

AUTHOR	TYPE OF SUBJECT		SETTING		TYPE OF TASK		GROUP INTERACTION AMONG SUBJECTS	
	STUDENT	WORKER	LAB	FIELD	REAL	ARTIFICIAL	YES	NO
Kaplan	X		X			X	X	
Kindler	X		X			X	X	
Ford	X		X			X	X	
Fleishman	X		X			X	X	
Falk	X		X			X	X	
Field	X		X			X		X
Liddel	X		X			X		X
Alcock	X		X			X		X
Morgan	Info Not Available							

Figure 2: Studies by Type of Subjects Used and Type of Setting

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